What is claimed is:

1. In an alternate polymer extrusion system of the kind that includes a first extruder, a second extruder, a first gear pump coupled to the first extruder, a second gear pump coupled to the second extruder, a die in communication with the first and second gear pumps, a first melt path downstream of the first gear pump, a second melt path downstream of the second gear pump, and a convergence of the first and second melt paths; the improvement comprising a pair of constrictions, one of which is defined in each of the first and second melt paths proximate to the convergence, whereby the constrictions increase the pressure required to force melt past each constriction to the convergence to thereby at least substantially reduce drool of melt out of the first and second melt paths to the convergence upon slowing or stopping of one of the gear pumps.

2. In the alternate polymer extrusion system of claim 1, the improvement further comprising said convergence being located in the die.

3. In the alternate polymer extrusion system of claim 2, the improvement further comprising the constrictions being located in the die.

4. In the alternate polymer extrusion system of claim 1, the improvement further comprising said convergence being at or closely proximate an outlet end of the die.

5. In the alternate polymer extrusion system of claim 1, the improvement further comprising a controller operatively connected to control at least one extrudate dimension-affecting parameter of the extrusion system, a sensor for detecting an extrudate dimension affected by the at least one dimension-affecting parameter, the controller including a lag time correction causing the controller to vary correctively the at least one dimension-affecting parameter in anticipation and correction of an undesired dimensional effect.

6. In the alternate polymer extrusion system of claim 1, the improvement further comprising a controller coupled to the first and second gear pumps to vary the speed of the first and second gear pumps, the controller being programmable to vary the speed and timing of the first and second gear pumps to compensate slower increases in the movement of melt past each constriction than would occur in the absence of the constriction by virtue of compression of the melt with increased pressure between the gear pump and the constriction, and to compensate slower decreases in the movement of the melt past each constriction than would occur in the absence of the constriction by virtue of expansion of the melt with decreased pressures between the gear pump and the constriction.

7. In the alternate polymer extrusion system according to claim 6, the improvement further comprising a sensor to measure a dimension of an extrudate during extrudate production, the sensor being operatively coupled to the controller, and lag time programming in the controller associating a dimensional anomaly with a change of speed of at least one of the gear pumps, whereby repetitive such gear pump speed changes can be compensated by the controller to effect reduction or elimination of the anomaly in subsequent gear pump speed changes.

8. In the alternate polymer extrusion system according to claim 7, the controller further comprising a display monitor, the controller being programmed to cause display on the monitor of a plurality of curves at least one of which represents said dimension as a function of distance along the extrudate.

9. In the alternate polymer extrusion system according to claim 8, the controller being programmed to cause display on the monitor at least one of a dimension-affecting parameter value as a function of distance along the extrudate.

10. In the alternate polymer extrusion system according to claim 9, the dimension-affecting parameter of the display being at least one of gear pump speed, air pressure within a hollow extrudate, pressure differential between the interior and exterior of a hollow extrudate and speed of a puller.

11. An alternate polymer system comprising first and second extruders including first and second gear pumps, first and second means for conveying melt from each of the first and second gear pumps to a convergence, means for constricting each of the first and second means for conveying, a die in communication with the first and second gear pumps, and means for controlling the speed of the first and second gear pumps.

12. The alternate polymer extrusion system according to claim 11, wherein the means for controlling the speed of the first and second gear pumps comprises means for causing an increase in speed of one of the first and second gear pumps and a decrease in speed of the other of the first and second gear pumps.

13. The alternate polymer extrusion system according to claim 12, wherein the means for causing an increase in the speed of one of the first and second gear pumps and a decrease in speed of the other of the first and second gear pumps comprises means for providing a speed increase increment to compensate for elasticity of melt in the means for conveying between the one of the first and second gear pumps and the means constricting that means for conveying.

14. The alternate polymer extrusion system according to either claim 12 or 13, wherein the means for causing an increase in speed of one of the first and second gear pumps and a decrease in speed of the other of the first and second gear pumps comprises means for providing a speed decrease increment to compensate for elasticity of the melt in the means for conveying between the other gear pump and the means constricting that means for conveying.

15. The alternate polymer extrusion system according to claim 14, further comprising sensor means for detecting a dimension of an extrudate emerging from the die, the sensor means being operatively coupled to the means for controlling, means for determining a time lag between a speed change in at least one of the first and second gear pumps and a resulting undesired dimensional change sensed by the sensor means, whereby the means for controlling is programmable to make corrective gear pump speed control in anticipation and avoidance of a similar undesired dimensional change.

16. The alternate polymer extrusion system according to claim 11, wherein in addition to controlling the speed of the first and second gear pumps, the means for controlling comprises means for controlling at least one further dimension-affecting parameter of the extrusion system.

17. The alternate polymer extrusion system according to claim 16, further comprising means for maintaining a pressure differential between an interior and an exterior of a hollow extrudate being formed by the system, said further dimension-affecting parameter being the value of the pressure differential.

18. The alternate polymer extrusion system according to claim 16, further comprising an air supply and a means for introducing air to the interior of a hollow extrudate being formed by the system, said further dimension-affecting parameter controlled by the control means being the air pressure in the hollow extrudate.

19. The alternate polymer extrusion system according to claim 16, wherein the control means has an output for control of a puller, said further dimension-affecting parameter controlled by the control means being the speed imparted to the extrudate by the puller.

20. A method of alternate polymer extrusion comprising:

(a) providing a first extruder including a first gear pump,

(b) providing a second extruder including a second gear pump;

(c) supplying a first material to the first gear pump;

(d) supplying a second material to the second gear pump;

(e) directing the first material along a first path from the first gear pump;

(f) directing the second material along a second path from the second gear pump;

(g) providing a convergence of the first and second paths;

(h) directing at least one of the first and second materials from the convergence of the first and second paths to an outlet of a die;

(i) extruding the at least one material by forcing through the die;

(j) constricting each of the first and second paths proximate the convergence; and

(k) varying the speed of the first and second gear pumps to vary the rate of flow of the first and second materials past the constriction to the convergence.

21. The method of alternate polymer extrusion according to claim 20, further comprising:

(l) repeatedly varying the speed of each of gear pumps to repeatedly vary the content of the first and second materials in an extrudate emerging from the die.

22. The method of alternate polymer extrusion according to claim 21, further comprising:

(m) initially imparting a compensatory increase in the speed of each gear pump in addition to each speed increase of that pump for increased delivery of a melt of one of the first and second materials therethrough, the compensatory increase in speed compensating for initial compression of the melt between the gear pump and one of the constrictions as that pump starts or increases in speed.

23. The method of alternate polymer extrusion according to either of claims 21 or 22, further comprising initially imparting a compensatory decrease in the speed of each gear pump in addition to each speed decrease of that pump for decreased delivery of a melt of one of the first and second materials therethrough, the compensatory decrease in speed compensating for the initial expansion of melt between the gear pump and one of the constrictions as that pump slows or stops.

24. The method of alternate polymer extrusion according to claim 21, further comprising determining a dimension of an extrudate emerging from the die, and controlling a dimension-affecting parameter of the alternate polymer extrusion method to control said dimension.

25. The method of alternate polymer extrusion according to claim 24, wherein the dimension-affecting parameter is the speed of at least one of the gear pumps.

26. The method of alternate polymer extrusion according to claim 25, further comprising determining the lag time between a pump speed alteration and a resultant dimension variation, and wherein controlling the dimension-affecting parameter includes timing corrective pump speed of the at least one pump to control the dimension at a location along the extrudate that is subsequently extruded.

27. The method of alternate polymer extrusion according to claim 24, wherein controlling a dimension-affecting parameter comprises controlling a pressure differential between the interior and the exterior of a hollow extruder.

28. The method of alternate polymer extrusion according to claim 24, wherein controlling a dimension-affecting parameter comprises controlling the speed of a puller.

29. A die for an alternate polymer extrusion system comprising:

(a) a first melt path leading into the die from a first input opening;

(b) a second melt path leading into the die from a second input opening;

(c) a convergence of the first and second melt paths in the die;

(d) a constriction in each of the first and second melt paths proximate and upstream of the convergence, and;

(e) an output opening for the emergence of an extrudate.

30. The die for an alternate polymer extrusion system according to claim 29, further comprising a passage downstream of the convergence and leading to the output opening, the passage being of sufficient length to permit polymer melt flowing from the convergence to the output to have its cross-sectional shape established.

31. The die for an alternate polymer extrusion system according to claim 29, further including at least one further melt path and at least one further constriction in the one further melt path.